

IN THE CLAIMS

What is claimed is:

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~~1.~~ An embossing tool for mechanically embossing a surface covering comprising:

a slurry, the slurry having a pattern and releasably attached to a backing, and the slurry comprising a filler and a binder.

2. The embossing tool of claim 1, wherein the slurry is substantially stable at a temperature range of about 200°F to about 450°F.

3. The embossing tool of claim 1, wherein the backing is selected from the group consisting of a roll, a drum, a belt, a plate and combinations thereof.

4. The embossing tool of claim 1, wherein the binder is biodegradable.

5. The embossing tool of claim 1, wherein the binder comprises a gelatin.

6. The embossing tool of claim 1, wherein the slurry comprises cornstarch.

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~~7.~~ The embossing tool of claim 1, wherein the slurry comprises clay.

8. The embossing tool of claim 1, wherein the filler comprises limestone.

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9. The embossing tool of claim 1, wherein the filler has an average mesh size of between about 20 and about 400.

10. The embossing tool of claim 9, wherein the embossing tool has at least two different sized fillers.

11. The embossing tool of claim 10, wherein a first sized filler has a mesh size ranging from about 20 to about 60 and a second sized filler has a mesh size ranging from about 250 to about 450.

12. The embossing tool of claim 1, wherein the slurry pattern is printed in register with a pattern printed on the surface covering.

13. The embossing tool of claim 1, wherein the slurry is recyclable.

14. The embossing tool of claim 1, wherein the slurry comprises:
filler from between about 30% to about 70% by weight;
water from about 5% to about 70% by weight; and
a binder from between about 5% to about 25% by weight.

15. The embossing tool of claim 14, wherein the slurry further comprises up to about 15% by weight of a plasticizer.

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16. The embossing tool of claim 15, wherein the plasticizer comprises a vegetable oil.

17. The embossing tool of claim 1, further including a biocide.

18. A method of manufacturing a mechanically embossed surface covering comprising:

printing a slurry in a pattern onto a surface covering or surface covering component;

heating the slurry residing on the surface covering;

compressing the slurry into the surface covering; and

removing the slurry.

19. The method of claim 18, wherein compressing the slurry onto the surface covering includes mechanically embossing the surface covering or surface covering component.

20. The method of claim 19, wherein the surface covering is mechanically embossed in register with a printed pattern on the surface covering.

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21. The method of claim 18, wherein the slurry is compressed onto the surface covering by an embossing roll.

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22. The method of claim 21, wherein the embossing roll has a textured surface.
23. The method as claimed in claim 18, wherein the slurry is compressed onto the surface covering by an embossing belt or embossing plate.
24. The method as claimed in claim 18, wherein the slurry is applied by screen printing onto the surface covering.
25. The method as claimed in claim 18, wherein the slurry comprises a filler and a binder.
26. The method of claim 18, wherein the binder is biodegradable.
27. The method of claim 18, wherein the slurry is applied in registered with a printed pattern on the surface covering.
28. The method of claim 18, wherein the slurry is reclaimed after being removed from the surface covering.

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29. The method as claimed in claim 18, wherein the surface covering comprises an expandable foam layer, and at least one inhibitor or activator composition disposed as a pattern proximate the foam layer, and the surface covering is expanded and chemically embossed during the heating step.

30. The method as claimed in claim 18, wherein the surface covering or surface covering component is chemically embossed before the slurry is applied.

31. A method of manufacturing a mechanically embossed surface covering comprising:

printing and solidifying a slurry in a pattern onto a backing to create an embossing tool; and

using the embossing tool to mechanically emboss a surface texture onto a surface covering.

32. The method of claim 31, wherein the surface covering is mechanically embossed in register with a printed design on the surface covering.

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33. The method as claimed in claim 31, wherein the backing is selected from the group consisting of a belt, a drum, a roll, a plate and combinations thereof.

34. The method as claimed in claim 31, wherein the slurry is applied by screen printing onto the backing.

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35. The method as claimed in claim 31, wherein the slurry comprises a filler and a binder.

36. The method of claim 31, wherein the binder is biodegradable.

37. The method of claim 31, wherein the slurry is printed in register with a printed pattern on the surface covering.

38. The method of claim 31, further including removing the slurry after embossing the texture onto the surface covering.

39. The method of claim 38, wherein the slurry is reclaimed after being removed.

40. The method of claim 31, wherein the surface covering is chemically embossed.

41. The method of claim 31, further including imparting a differential gloss on the surface covering.